We Claim:

1. A method for separating particles having different dielectric constants comprising the steps of:

separating the particles in a medium having a dielectric constant chosen to enhance the sensitivity of the discrimination between the particles, and

changing the medium to one having a dielectric constant which causes faster separation between the particles.

2. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium having a dielectric constant which is closer to one species of particle than the other.

3. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium where the difference in dielectric constant between the medium and the first particle is substantially the same as the difference in dielectric constants between the particles.

4. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium where the difference in dielectric constant between the medium and the first particle is less than the difference in dielectric constants between the particles.

5. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium having a dielectric constant which is substantially equal to the dielectric constant of one of the particles.

6. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium having a dielectric constant differing from the dielectric constant of at least one of the particles by 10% or less.

7. The method for separating particles of claim 1 wherein the sensitivity is enhanced by utilizing a medium having a dielectric constant differing from the dielectric constant of at least one of the particles by 5% or less.